DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ADAMS POND

Town: DERRY

Maximum depth (m): 1.5

County: Rockingham

River Basin: Merrimack

Latitude: 42°55'05" N

Longitude: 71°16'36" W

Shore configuration: 2.05

Elevation (ft): 320

Shore length (m): 2100

Watershed area (ha): 1525.9

Watershed ponded: 0.6

Lake type: artificial

BIOLOGICAL:	7 September 1993
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 85%
#2	
#3	
PHYTOPLANKTON ABUNDANCE (cells/mL)	970
CHLOROPHYLL-A (µg/L)	8.89
DOM. ZOOPLANKTON (% TOTAL) #1	ASPLANCHNA 40%
#2	NAUPLIUS LARVA 24%
#3	BOSMINA 18%
ROTIFERS/LITER	113
MICROCRUSTACEA/LITER	105
ZOOPLANKTON ABUNDANCE (#/L)	218
VASCULAR PLANT ABUNDANCE	Very abundant
SECCHI DISK TRANSPARENCY (m)	1.0 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)	8.3
BACTERIA (E. coli, #/100 ml) #1	5
. #2	
#3	

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None Anoxic volume (m^3) : None

CHEMICAL:	Lake: ADAMS POND Town: DERRY
	7 September 1993
DEPTH (m)	0.5
pH (units)	7.3
A.N.C. (Alkalinity)	15.2
NITRATE NITROGEN	< 0.02
TOTAL KJELDAHL NITROGEN	0.64
TOTAL PHOSPHORUS	0.019
CONDUCTIVITY (µmhos/cm)	116.4
APPARENT COLOR (cpu)	
MAGNESIUM	1.26
CALCIUM	8.9
SODIUM	10.6
POTASSIUM	2.15
CHLORIDE	18
SULFATE	8
TN : TP	34
CALCITE SATURATION INDEX	1.9

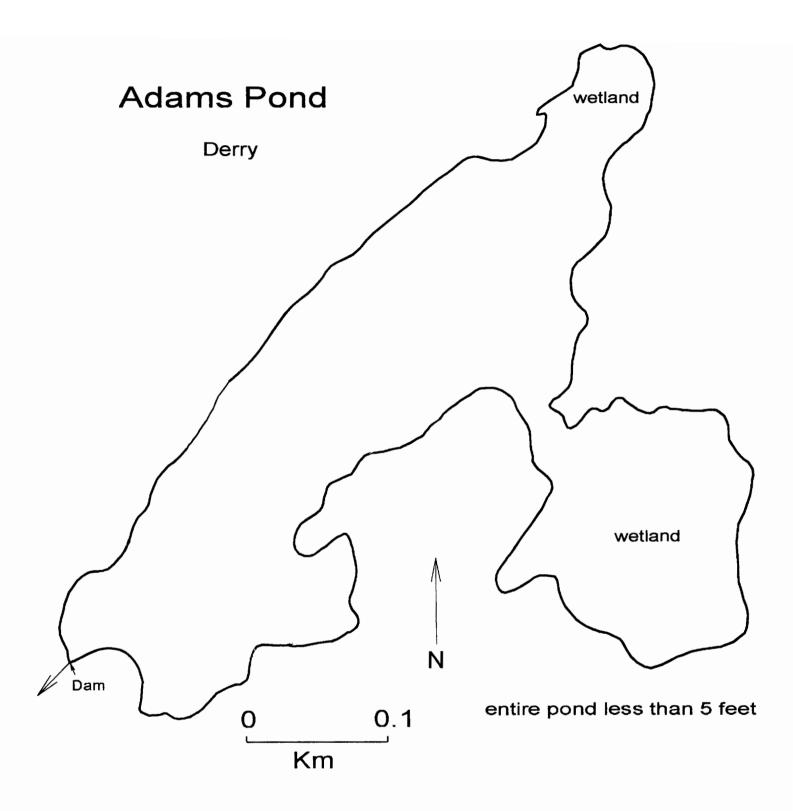
All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1993

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	4	6	2	12	Eutro.

COMMENTS:

- 1. This is a private, man-made pond. It lies in the watershed of Beaver Lake, Derry, and was surveyed as part of a diagnostic/feasibility study of Beaver Lake. No winter samples were collected.
- 2. Navigation, even by canoe, was hindered in many areas because of the dense bladderwort growth and organic muck.
- 3. Wholewater phytoplankton was dominated by Cryptomonas (27%), Peridinium (25%) and Chroomonas (18%).



FIELD DATA SHEET

LAKE: ADAMS POND

TOWN: DERRY

DATE: 09/07/93

WEATHER: PARTLY CLOUDY, 70'S

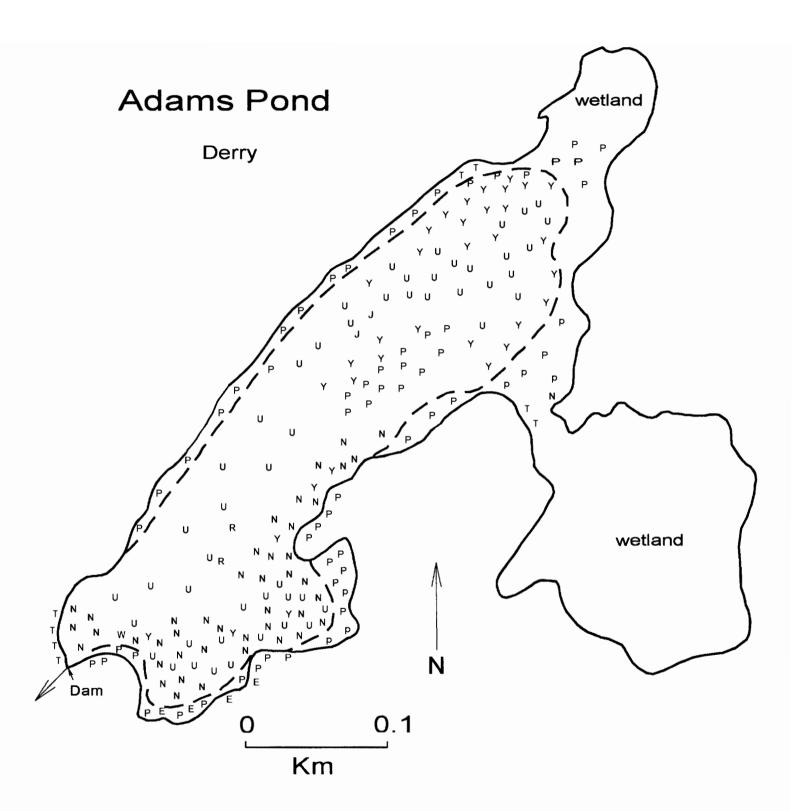
	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.5	23.5	8.3	96 %
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SECCHI DISK (m): 1.0 VOB COMMENTS:

BOTTOM DEPTH (m): 1.0

TIME: 1030

*Dissolved oxygen values are in mg/L



AQUATIC PLANT SURVEY

LAK	E: ADAMS POND	TOWN: DERRY	DATE: 09/07/93
Key	PLANT NAME		ABUNDANCE
I.C.y	GENERIC	COMMON	ADUNDANCE
N	Nymphaea	White water lily	Scattered
P	Pontederia cordata	Pickerelweed	Abundant
T	Typha	Cattail	Sparse
W	Potamogeton natans	Floating-leaf pondweed	Sparse
ប	Utricularia	Bladderwort	Very abundant
Y	Nuphar	Yellow water lily	Scat/Common
J	Najas	Bushy pondweed	Sparse
R	Potamogeton robbinsii	Robbins pondweed	Sparse
E	Eriocaulon septangulare	Pipewort	Sparse
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GENERAL OBSERVATIONS:

- 1. Bladderwort covered the entire bottom of the pond.
- 2. Much of the pickerelweed and pipewort was out of the water because the pond level was down by 3 or 4 feet.

OVERALL ABUNDANCE: Very abundant

3. <u>Oscillatoria</u> mats were present on the pond bottom.